

Green Line in black and white

The plastics institute SKZ in Würzburg examined the considerable energy savings made possible by the **Green Line** control.

Competence profile

Every one of our plastic granulators and repelletizing systems combines the experience and competence gained during many years of activity in the field of plastic recycling.

This experience is evident in the many perfected and detailed solutions which make everyday work easier for you and your staff, resulting in increased productivity. We strive to look at everything through our customers' eyes and to solve specific problems in an innovative and simple way, from practice for practice – that is the source of our competence.

We have developed well-proven solutions to meet your challenges in the recycling and discarding of sprues and rejects.

Please ask us – our staff is pleased to be at your full disposal for personal advice without obligation.

Your contact:

Das Kunststoff-Zentrum

SKZ

Messbericht

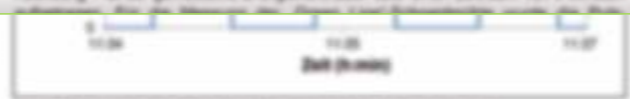
Projekt Nr.: W-337
Thema: Energieverbrauchs- und Vergleich der Schneidmühlen „Green Line“ und Standard
Ort: Wanner Technik GmbH
Alte Heerstraße 5
97877 Wertheim (Niederrhein)

3. Ergebnisse

Energieverbrauch im Betrieb

In der ersten Messung wurden die Energieverbräuche der Standard-Schneidmühle und der „Green Line“-Schneidmühle im laufenden Betrieb gemessen. Um eine mögliche Energieersparnis der „Green Line“-Schneidmühle festzustellen. Der Spritzgussprozess, bei dem die Schneidmühle betrieben wurde, war vom Kunden vorgegeben und hatte eine Zykluszeit von 52 Sekunden. Der Energieverbrauch der Standard-Schneidmühle wurde über einen Zeitraum von 30 Minuten erfasst.

Die für die Schneidmühle durchgeführten und im Anhang 11 aufgeführten Versuche, in Anhang 12 der gemessene Energieverbrauch über einen Zeitraum von 3 Minuten.



Der durchschnittliche Energieverbrauch von Standard- und „Green Line“-Variante sind in Tabelle 2 aufgeführt.

Tabelle 2: Durchschnittlicher Energieverbrauch

Schneidmühle	Energieverbrauch in kWh
Standard-Schneidmühle im Betrieb	2,463
„Green Line“-Schneidmühle im Betrieb	0,121

Die „Green Line“-Schneidmühle hat mit der eingesetzten Puls-Pausen-Modulation einen durchschnittlichen Energieverbrauch von 0,121 kWh und damit eine Energieersparnis von 95 % gegenüber der Standard-Schneidmühle mit 2,4 kWh. Die durchschnittliche Energieersparnis wurde ermittelt anhand der Formel:

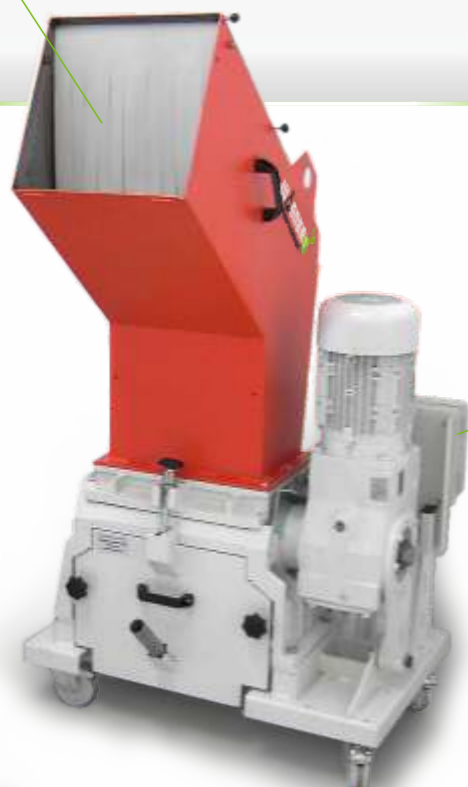
$$\text{Energieersparnis} = \frac{\text{Energieverbrauch Standard} - \text{Energieverbrauch Green Line}}{\text{Energieverbrauch Standard}} \cdot 100\%$$

Wanner-Technik
Green Line

The energy saver control
for granulators – because
the times when electricity was
cheap are definitely over.



Power When You Need It!



Wanner-Technik Green Line

Green Line controls from Wanner-Technik with **integrated automatic stop-start** ensure that your granulator only runs when necessary. Applications with small throughputs and long cycle times have achieved energy savings of greater than 80%.

Green Line – solution that reduces your operation costs whilst protecting the environment.

General specifications

	Output / kW	Operating modes	Voltages	Pulse / pause interval adjustable by potentiometer	Switching elements
C series granulator	2,2 kW	continuous operation	400 V/50 Hz 460 V/60Hz	operating time: 18 sec – 3 min	SSR / contactor combination
	3,0 kW				
	4,0 kW				
Xtra series toothed roller granulator	1,1 kW	integrated adjustable pause interval	400 V/50 Hz 460 V/60Hz	Pause interval: 1 min – 10 min	SSR / contactor combination
	1,5 kW				
	2,2 kW				
D series granulator (Compact)	4,0 kW	pause interval controlled via external contact			

Cost-effective quality – Wanner-Technik Beside-the-press granulator with **Green Line** controls.

The benefits of a closed sprue circuit with a beside-the-press granulator are obvious – once the moulding process is complete, the sprues generated in each cycle ultimately disappear into the product.

This system becomes even more efficient when, with relatively small material throughputs per hour (whether owing to small, light sprues or long cycle times), the granulator is only operated when necessary.

This significantly reduces the time during which the granulator is idling, waiting for the next sprue.

Independent tests have demonstrated significant **energy savings – up to 80%** and even more in some cases.

The modern technology used for **stop-start control** ensures that that granulator will

operate efficiently for many years whilst adhering completely to required safety standards.

The running time and pause time can be easily adjusted to the relevant application via a potentiometer, or controlled via a number of selectable operating modes, e.g. “Continuous operation” or “Operation via an external signal” which allows the granulators to remain capable of universal use.

Thanks to high-torque drives, whose starting torque is greater than the nominal torque, the Wanner-Technik granulators operate reliably with direct drive, even when there are several sprues in the cutting chamber.

Initial investment in this technology typically gives a return within 12 months – good news for both your accounts and the environment.

Caption:

- Energy savings of up to 80% or more in some cases!

- Pay back often within one year

- Reliable start-up of granulators thanks to high-torque drives

- Easy adjustment to the relevant application via potentiometer – the granulator remains universally usable

- Long service life thanks to modern semi-conductor switching elements

- No compromises on safety

- Available for Wanner-Technik C series, D series Compact and Xtra series



- Green Line** control is available for the Xtra series, C series and D 25.38 Compact models (shown from top to bottom).